South Star Cogeneration LLC is seeking approval from the CEC to construct and operate the South Star Cogeneration Project (South Star) in western Kern County approximately 35 miles southwest of Bakersfield, California. The South Star Project will consist of two substantially identical cogeneration plants, South Star I (Section 17, T32S, R23E) and South Star II (Section 7, T32S, R23E), that are located approximately 1.5 miles apart on contiguous Texaco California Inc. (TCI) property in the South Midway-Sunset Oilfield. The Application for Certification (AFC) presents an evaluation of the entire South Star Project in a manner to clearly indicate the environmental effects associated with each site and its related linear facilities.

South Star I includes the following project components shown on Figure 2-1:

- South Star I site;
- Replacement of poles and conductor for approximately 4.7 mile of existing 12.47 kV transmission line;
- 0.6 mile 115 kV transmission line extension to South Star I site;
- Alternative stand-alone 5.3 mile 115 kV transmission line;
- 3.6 miles of natural gas line (Kern-Mojave to Station 109 and natural gas line placed within TCI South Midway Utility Corridor Segment A);
- Approximately 2.4 mile Alternative Route 1 natural gas line; and
- Improved access road (Midoil Road to South Star I site).

South Star II includes the following project components as shown on Figure 2-1:

- South Star II site;
- 3.8 mile addition of second 115 kV circuit on proposed South Star I transmission line;
- 1.4 miles of natural gas line (placed within TCI South Midway Utility Corridor Segment B);
- Approximately 1.5 mile Alternative aboveground Route 2 natural gas line; and
- Improved access road (Midoil Road to South Star II site).

This section describes the health and safety programs and procedures that will be established and implemented during construction and operation of South Star, including the

substation, transmission line, and the cogeneration facilities. Health and safety information on the electrical transmission system is provided in Section 6.0. These programs will be established in accordance with applicable laws, ordinances, regulations, and standards (LORS) to ensure the safety and well being of all workers participating in South Star I and II. The following sections describe the affected environment, define applicable LORS, identify anticipated occupational hazards associated with the construction and operation of the facility, describe health and safety programs that will be established during construction and operation and identify safety permit requirements and local agency contacts.

8.7.1 Affected Environment

Figures 8.7-1 and 8.12-1 show the locations of fire protection systems and emergency equipment and the locations of hazardous and toxic materials used at the plant.

8.7.2 Laws, Ordinances, Regulations, and Standards

Conformance with LORS is discussed in Section 8.7.3.1 for all construction related requirements and in Section 8.7.3.2 for all requirements applicable to operations and maintenance. Conformance with training requirements are covered in Sections 8.7.4.1 and 8.7.4.2 for construction and operation and maintenance, respectively. The LORS applicable to worker health and safety are summarized in Table 8.7-1. California is one of 23 states that operates its own Occupational Safety and Health Administration (Cal-OSHA). As such, Cal-OSHA regulations will take precedence over the Federal OSHA regulations at this site. In addition to requiring all contractors and employees to comply with established LORS, periodic health and safety compliance self audits will be performed during the course of constructing and operating South Star I and II to ensure that employees are conducting their work in accordance with the regulations.

8.7.3 Occupational Safety and Health

Construction, operation, and maintenance activities associated with each South Star site may expose workers to a wide variety of physical and chemical hazards. Worker exposure to these hazards will be minimized through adherence to appropriate engineering design criteria, implementation of appropriate administrative procedures, use of personal

protective equipment, and compliance with applicable health and safety LORS. Potential hazards that workers may be exposed to while working on either South Star I or II are presented in Table 8.7-2. Formal health and safety procedures and programs will be established and implemented by all respective employers (contractors) to control the various hazards and provide for a safe workplace.

The programs, regulations, and preventive measures intended to protect worker health and safety are described in the construction and operations portion of this section. The comprehensive health, safety, and fire prevention program enforces safe and healthful practices and implements an accident/injury prevention program intended to ensure safe and healthful operations at the facility upon startup and operation.

During the construction, operation, and maintenance of each South Star site, employers will develop and implement the necessary health and safety programs to mitigate the identified workplace hazards and to protect the health and safety of the workers. Brief descriptions and outlines detailing anticipated program content are provided in the following sections.

8.7.3.1 Construction Health and Safety Programs

During construction, the general contractor will be held responsible for enforcing contract provisions to assure compliance with the construction safety program and federal, state, and local health standards that pertain to worker health and safety. Consistent with OSHA's policy on multi-employer work sites, each employer will be responsible for the health and safety of their own employees. Periodic health and safety audits will be held to verify contractor and subcontractor compliance with contractual health and safety obligations.

Construction Injury and Illness Prevention Program. The overall written Construction Safety Program will include provisions to ensure compliance with Cal-OSHA's Injury and Illness Prevention Program (IIPP) requirements (California Code of Regulations [CCR] Title 8, Section 1509) and will include:

- A written Code of Safe Practices that relates to construction operations;

- Identification of the person or persons responsible for implementing the construction safety program;
- Posting of the Code of Safe Practices at a conspicuous location at the job site office and providing it to each supervisor who shall have it readily available;
- A description of the system for identifying workplace hazards, including work place inspections, job hazard analysis, and written hazard assessments;
- Periodic meetings with employee representatives, supervisors, and management to discuss safety issues, including compliance assessments, accidents, injuries, and new or modified health and safety procedures;
- A system for ensuring employee and subcontractor compliance;
- Routine "tool box" or "tailgate" safety meetings conducted with employees and supervisors;
- System for promoting employees' feedback and suggestions for improving work place safety;
- Procedures for promptly correcting unsafe conditions; and
- Identification of safety training and experience requirements for specific work activities.

A Phase I Environmental Site Assessment (Phase I ESA) was performed to identify the potential presence of contaminated soil at each South Star site. The methodology and results are described in detail in Section 8.13, Waste Management, of this AFC. The Phase I ESA did not reveal a high likelihood that contaminated soil would be present or encountered during excavation or grading at either site. However, since both sites are within a highly developed oilfield, the possibility that on-site soils may be impacted by heavy crude oil cannot be ruled out. Although it is unlikely that oil-impacted soils will be encountered at either site, the following safe work procedures will be included in each Construction Injury and Illness Prevention Program to ensure workers are protected:

- A Health and Safety Officer (HSO) will be identified and assigned to the site on a full-time basis. The HSO will assess potential hazards to workers if crude oil-impacted soil is encountered during excavation and grading activities at each site.

- Crude oil-impacted soil will be removed and recycled or disposed in accordance with local, state, and federal law.

- Prior to excavation in areas likely to encounter crude oil-impacted soils, surveyor and spotters will be trained by the HSO to recognize crude oil-impacted soil, to identify related potential health hazards and to implement procedures to control potential exposures to workers.

Construction Personal Protective Equipment Program. Contractor employees will be required to use the required personal protective equipment (PPE) during construction. Required PPE shall be identified through job hazard analysis (JHA) and general industry standards. The type of PPE required for each job task will be described in the job safety analysis for that task. The use of PPE for site activities includes, but is not limited to, the items described in Table 8.7-3. All PPE worn on site will comply with Cal-OSHA and American National Standards Institute (ANSI) requirements. Respiratory protection will be included in the PPE program. Employees will not be required to wear respiratory protection until they have received a medical evaluation, respirator fit-testing and training on the proper use, limitations, and care of respirators.

Construction Exposure Monitoring Program. An exposure monitoring program will be developed to evaluate potential employee exposures to hazardous/toxic materials. Potential exposures will be identified during the task-specific JHAs. Air monitoring may be conducted if necessary to evaluate the potential for employee exposures to the contaminants of concern. Airborne exposures will be controlled through the implementation of engineering controls, administrative controls, or PPE. Air monitoring will also be required in support of other safety programs including, confined space entry, hot work permits, and emergency response. Sound level monitoring will also be performed as necessary during the construction phase to evaluate potential employee noise exposures.

Construction Onsite Fire Suppression and Prevention. Both South Star sites will rely on onsite fire protection systems and local fire protection services. The contractor will develop a Fire Protection and Prevention Plan to be followed throughout all phases of construction and will provide the specified fire fighting equipment. The fire protection and prevention program will address each of the following requirements:

- General requirements;
- Responsibilities;
- Housekeeping;
- Employee alarm/communication system;
- Portable fire extinguishers;
- Fixed fire fighting equipment;
- Fire control;
- Flammable and combustible liquid storage;
- Use and handling of flammable and combustible liquids;
- Dispensing and disposal of flammable and combustible liquids;
- Servicing and refueling areas; and
- Training.

During construction, portions of the facility fire suppression system will be placed in service as soon as practicable to provide early fire protection. The fire protection systems for the facility are described in Section 2.2.10. Construction fire prevention procedures will be developed in accordance with applicable regulations (8 CCR, Section 1620 et seq.) and will be followed as necessary to prevent construction-related fires. Special emphasis will be given to operations involving open flames, such as welding, metal cutting, and brazing. Hot work permits will be required for specific activities that present the potential for fire and personnel involved in such operations will receive appropriate training by the contractor. In addition, a fire watch, utilizing the appropriate class of extinguishers or other equipment, will be maintained during hot work operations. Site personnel will not be expected to fight fires past the incipient stage.

Materials brought on site by contractors must conform to contract requirements, insofar as flame resistance or fireproof characteristics are concerned. The contractor has to provide a copy of the Material Safety Data Sheet (MSDS) for each material and retain a copy in his files. Specific materials in this category include fuels, paints, solvents, plastic materials, lumber, paper, boxes, and crating materials. Specific attention will be given to compressed gases, fuel, solvent, and paint storage.

Elements of the onsite fire suppression system during construction will consist of portable and fixed fire-fighting equipment. Portable fire fighting equipment will consist of fire extinguishers and small hose lines in conformance with Cal-OSHA and the National Fire Protection Association (NFPA). Periodic fire prevention inspections will be conducted by the contractor's safety representative.

Fire extinguishers will be inspected monthly and replaced immediately if defective or in need of recharge. All fire-fighting equipment will be located to allow for unobstructed access to the equipment and will be conspicuously marked. A temporary or permanent water supply, of sufficient volume, duration and pressure to operate the required fire-fighting equipment, will be provided. Combustible materials will be controlled in covered roll-off dumpsters. Designated, approved flammable materials storage areas and flammable materials storage containers will be provided with adequate fire prevention systems.

Construction Offsite Fire Suppression Support. The South Star Project onsite fire suppression systems will be supported by the Kern County Fire Department that will provide backup assistance as described under the fire protection provisions developed for working safely during construction activities. The nearest fire station is located in Fellows (Station No. 23), approximately 2 miles north of the South Star sites, allowing for a short response time. The local fire response units will be provided information regarding the type and location of potential fire hazards at the site. This information will be included in emergency response planning. Routine fire prevention inspections will be conducted by the Fellows Fire Department.

Construction Emergency Action Plan. An emergency action plan (EAP) will be developed for the construction phase of both South Star sites. The EAP will designate responsibilities and actions to be taken in the event of an emergency at the site. All employees working at the site will be trained on the contents of the program. The EAP will include:

- Emergency roles and responsibilities;
- Emergency notification procedures; and

- Egress routes and mustering points.

Construction Written Safety Programs. Additional written safety programs that will be established for the construction phase include, but are not limited to:

- Hazard communication program;
- Confined space program;
- Control of hazardous energy program (Lock Out/Tag Out);
- Hearing conservation program;
- Respiratory protection program;
- Blood-borne pathogens control program;
- Injury and accident reporting and investigation program;
- Ergonomics program;
- Emergency response program, including first aid and medical services;
- Smoking policy;
- General housekeeping, material handling and storage procedures;
- Vehicle and traffic procedures;
- Elevated work procedures;
- Heavy equipment procedures;
- Hot work procedures;
- Crane and hoist procedures;
- Compressed gas and air handling procedures;
- Subcontractor safety programs;
- Equipment inspection programs;
- Supervisor safety and health orientations;
- Excavation and trenching program; and
- Hazard Identification Team and Safety Marshal program

8.7.3.2 Operations and Maintenance Health and Safety Programs

Upon completion of construction and implementation of routine operations at each South Star site, the construction safety and health program will transition into an operations-oriented program to reflect the hazards and controls necessary during routine

operations and maintenance. Program outlines for the Injury and Illness Prevention Plan, Fire Protection and Prevention Program, Emergency Action Plan, and PPE Program that will be implemented are provided below.

Injury and Illness Prevention Plan. The primary mitigation measures for worker hazards during normal plant operation and maintenance are contained in the IIPP, this is required by 8 CCR, Section 3203. The written IIPP will designate a safety representative who is responsible for implementing the program. It will also describe safety training for new employees and procedures for tracking safety training. JHAs will identify safety hazards related to each work task and establish procedures for avoiding, correcting, reporting, and notifying employees of these hazards.

The IIPP will contain the following information and procedures:

- Identity of the person(s) with authority and responsibility for implementing the program;
- A system for ensuring that employees comply with safe and healthy work practices;
- A system for facilitating employer-employee communications regarding safety;
- Procedures for identifying and evaluating workplace hazards including inspections to identify hazards and unsafe conditions;
- Methods for correcting unhealthy/unsafe conditions in a timely manner when there is an imminent danger;
- An employee training program that includes:
  - introducing the program;
  - training of new, transferred, or promoted employees;
  - training on new processes and equipment;
  - supervisors training; and
  - contractor training.
- Methods of documenting inspections and training, and for maintaining appropriate records.

Fire Protection and Prevention Program. Fire protection at each South Star site will include measures relating to safeguarding human life, preventing personnel injury,

preservation of property and minimizing downtime due to fire or explosion (National Safety Council, 1992). It will principally involve physical arrangements, such as sprinkler systems, water supplies and fire extinguishers as shown in Figure 8.7-1. Fire protection measures will include fire prevention measures to prevent the inception of fires. Of concern are adequate exits, fire-safe construction, reduction of ignition sources, and control of fuel sources.

Each South Star site will become the fire protection responsibility of the Kern County Fire Department, Fellows Station (No. 23). As such, fire suppression systems will be subject to review and approval by the Fellows Fire Station, which will have final approval responsibility. In addition, facilities will be designed by a California Registered Fire Protection Engineer and fire protection equipment will be installed and maintained in accordance with applicable NFPA standards and recommendations (National Fire Protection Association, 1994).

The Kern County Fire Department representative from the Fellows Station will perform the final inspection of each South Star site when construction is complete. In addition, the Kern County Fire Department will conduct periodic fire and life safety inspections thereafter, including reviewing and approving programs for regular equipment inspections and servicing and for the training of employees in fire protection procedures. In addition, the project's insurance carrier will provide annual inspections by a fire protection specialist. Servicing of the fixed carbon dioxide (CO_2) and portable fire extinguishers will be conducted by a licensed contractor.

The overall fire prevention and protection program for the facility will be designed and implemented to protect both personnel and property. The program will specifically address:

- Names and/or job titles responsible for maintaining equipment and accumulation of flammable or combustible material control;
- Procedures in the event of fire;
- Fire alarm and protection equipment;
- System and equipment maintenance;
- Monthly inspections;

- Annual inspections;
- Fire fighting demonstrations and training; and
- Housekeeping practices.

Fire Suppression. The following fire suppression systems are proposed:

- **Carbon Dioxide Fire Protection System**. This system protects the combustion turbine generator and appropriate accessory equipment compartments from fire. The system will have fire detection sensors in all appropriate compartments that warrant such protection.
- **Fire Hydrants/Hose Stations**. This system will be the primary plant fire protection system. Water will be supplied from a West Kern Water District source. Hydrants/hose stations will be located in a "fire loop" approximately every 300 feet around the perimeter of the plant.
- **Sprinkler System**. This system will provide protection to portions of the common services buildings.
- **Smoke Detectors, Combustible Gas Detectors, and Fire Extinguishers**. These will be provided at all locations having potential fire hazards due to the presence of combustible liquids, solids, or other highly flammable materials, and where major property damage could result. Extinguishers will be located at Uniform Fire Code-approved intervals throughout the facility as directed by the local fire inspector and selected for the appropriate class of service.

Water will be used as the primary extinguishing agent. Chemical and gas extinguishing agents (permanently installed or in portable extinguishers) will be provided in special hazard areas where water would be ineffective or harmful to the equipment being protected.

Emergency Action Plan. In addition to the incorporation of various safety and environmental features and design measures to minimize emergencies and their effects on public and worker safety, each South Star site will have a site-specific Emergency Action Plan. An example Emergency Action Plan outline is provided in Table 8.7-4. The Emergency Action Plan will address potential emergencies, including chemical release fires, bomb threats, pressure vessel ruptures, ammonia releases, and other catastrophic events. It will describe evacuation routes, alarm systems, points of contact, assembly areas, responsibilities, and other actions to be taken in the event of an emergency. The plan will include a layout map, a fire extinguisher list, and a description of arrangements with local emergency

response agencies for responding to emergencies. The Emergency Action Plan will be used in conjunction with the IIPP.

Hazardous Materials Management Program. As described in Section 8.12, there will be several chemicals stored and used during operation of both of the South Star Project sites. The storage and handling of chemicals will follow applicable LORS to minimize risk to workers. Chemicals will be identified and stored in appropriate chemical storage facilities. Bulk chemicals will be stored in above-ground storage tanks; other chemicals will be stored in their delivery containers. Chemical storage and chemical feed areas will be surrounded by temporary or permanent containment or curbing to contain leaks and spills. The containment areas will be sized to hold an appropriate volume (considering the potential for the local hazard contingencies) as designated by a California registered Professional Engineer.

Safety showers and eyewash stations will be provided in or adjacent to chemical storage and use areas in accordance with 8 CCR requirements. Standard PPE for use during materials handling activities will be provided in a readily available location for use during minor chemical spill containment and cleanup activities by plant personnel. Adequate supplies of absorbent material will also be available onsite for minor spill cleanup. A hazardous material emergency response team, trained in the accidental release of the chemicals used and stored at the plant, will be available through contract. Emergency contact numbers will be available to summon assistance from these contractors and for notification of local agencies. These procedures will be detailed in the Emergency Action Plan.

Personal Protective Equipment Program:

- Hazard analysis and prescription of PPE;
- Personal protective devices;
- Head protection;
- Eye and face protection;
- Body protection;
- Hand protection;
- Foot protection;

- Sanitation;
- Safety belts and life lines;
- Protection for electric shock; and
- Respiratory protective equipment.

Operations and Maintenance Written Safety Program. Additional written safety programs will be developed as components of the overall operations and maintenance health and safety plan for each South Star site. These programs include, but are not limited to, the following:

- Blood-borne Pathogens Control Program;
- Hazard Communication Program;
- Respiratory Protection Program
- Hearing Conservation Program
- Hazardous Energy Control Program;
- Confined Space Entry Program;
- Safe Work Practices Program;
- Ergonomics Program;
- General Facility Safety Procedures:
  - Compressed Gas Safety Procedures;
  - Heavy Equipment Safety Procedures;
  - Hand Tools and Equipment Guarding Procedures;
  - Hoist and Rigging Safety Procedures;
  - Slips, Trips, and Falls Prevention Procedures; and
  - Hot Work Safety Procedures;
- Fall Protection Program;
- Contractor Safety Program;
- Process Safety Management (PSM) Program; and
- Risk Management Plan (RMP).

8.7.4 Safety Training Programs

To ensure that workers possess the necessary information to recognize hazards and protect themselves from hazards, comprehensive training programs for construction personnel and operations/maintenance personnel will be implemented.

8.7.4.1 Construction Safety Training Program

Workers participating in the construction phase of the South Star Project will participate in applicable training programs designed to protect themselves and others from injuries while working at the site. All construction personnel will be required to attend a basic site safety orientation training course. Additional training will be required based upon each individual's specific job responsibilities. All training courses will be documented and attendance records will be maintained at the local job site trailer. Table 8.7-5 provides an overview of the training programs that will be available to construction personnel.

8.7.4.2 Operation and Maintenance Safety Training Programs

Operations and maintenance employees will be given instructions regarding their responsibility for the safe conduct of their work. These instructions will be given at the time the employee is first hired and as an ongoing training program of hazard recognition and avoidance. Employees will also be instructed in the safety regulations pertinent to their employment tasks. Safe working conditions, work practices, and protective equipment requirements will be communicated in the following manner:

- A new, promoted, or transferred employee will receive safety training orientation.
- Safety meetings will be held with employees.
- "Toolbox/tailgate" safety meetings will be conducted periodically for each crew. General safety topics and specific hazards that may be encountered will be discussed. Comments and suggestions from all employees will be encouraged.
- A monthly staff safety meeting will be held for supervisors.
- Hazard communication training, including California Proposition 65 warnings and discharge prohibitions, will be conducted as necessary when new hazardous materials are introduced to the workplace.

- Material safety data sheets will be available as required for all appropriate chemicals.
- A bulletin board with required postings and other information will be maintained at the plant site.
- Warning signs (e.g., hazardous waste storage area, confined space area) will be posted in hazardous areas that comply with applicable regulations (i.e., bilingual, font size).

Safety training will be provided to each new employee as described below:

- A list of safe work rules for each South Star site will be explained to each new employee.
- A copy of the applicable Safe Work Practices will be given to each new employee. The provisions will be incorporated into training for the qualifications programs so that employees may fully understand what the protective provisions mean.
- The Hazard Communication Program and requirements for personal protection for the types of hazards that may be encountered at each South Star site will be explained and documented.
- Unusual hazards that are found onsite will be explained in detail to each new employee, including any specific requirements for personal protection.
- Safety requirements for the new employee's specific job assignment will be explained by the foreman upon initial assignment and upon any reassignment.

Contractors. An element of the Operations and Maintenance Safety Training Program includes addressing compliance with contractor safety while onsite. Contractors will be provided with a list of potential job safety hazards for their assigned activity by a foreman, including safety rules, chemical exposure hazards, physical hazards, and personal protection equipment. Contractors will also be invited to attend "tailgate" safety meetings.

Table 8.7-6 provides an overview of the training programs that will be available to operations and maintenance personnel.

8.7.5 Permitting Agencies

Table 8.7-7 provides a list of applicable permits related to the protection of worker health and safety applicable to South Star I and II. Provided for each permit are the activities covered and application requirements to obtain the permit.

8.7.6 Permitting Contacts

All permits noted in Table 8.7-7 may be obtained from the Cal-OSHA district office, which for work places in Kern County (west of Highway 99), is located in Van Nuys, California (818) 901-5403.

8.7.7 Permitting Schedule

Permits listed in Table 8.7-7 are supplied on an as-needed basis by any Cal-OSHA district or field office. Notification requirements are listed as within 24 hours of a permit triggering event; therefore, a specific permitting schedule is not provided as the permits may be required at variable times during the construction of the plant or during operations.

8.7.8 Agency Contacts

Agency contacts regarding worker health and safety at the South Star Project are as follows:

Agency	Contact/Title	Telephone
Kern County Fire Department	Chief Dan Clark/ Kern County Fire Chief	(661) 862-8900
Fellows Fire Station (#23)	Captain Doug Wagner/ Station Captain	(661) 768-4341
Cal/OSHA (District Office) Van Nuys, CA	Bill Siener/ Area Manager	(818) 901-5403

8.7.9 Proposed Conditions of Certification

In order to ensure compliance with applicable LORS and/or to reduce potentially significant impacts to less than significant levels, proposed conditions of certification are contained in Appendix K.

8.7.10 Cumulative Effects

While construction, operation, and maintenance activities associated with the South Star Project may expose workers to physical and chemical hazards, the impacts are

minimized through appropriate equipment and plant design with applicable codes and standards, and incorporating procedures to comply with applicable health and safety regulations. Similar exposures would be expected for other energy facilities planned such as Midway-Sunset, Elk Hills, and Sunrise II. However, those exposures, like the South Star Project, are site-specific and pose no cumulative impact on worker health and safety.

8.7.11 References

California Code of Regulations. Title 8. General Industry Safety Orders, (Chapter 4, Subchapter 7) and Construction Safety Orders (Chapter 4, Subchapter 4).

Code of Federal Regulations. Title 29 part 26. Health and Safety for Construction and Title 29 Part 1910 Occupation Safety and Health Standards.

National Fire Protection Association, 1994. A Compilation of NFPA Codes, Standards, Recommended Practices and Guides. Quincy, Massachusetts.

Table 8.7-1. Worker Health and Safety Laws, Ordinances, Regulations, and Standards

Administering Agency	Applicable LORS	Requirement/Compliance	AFC Conformance Section
California Occupational Safety and Health Act 1973	Title 8, CCR	The Act establishes the Cal/OSHA and establishes minimum safety and health standards for work operations occurring in the state.	8.7.3
	8 CCR, Section 339	Requires listing of hazardous chemicals relating to the Hazardous Substance Information and Training Act.	8.7.3.1, 8.7.3.2
	8 CCR, Section 450 et seq. – 560 et seq.	Establishes safety orders for pressurized vessels including: air tanks, anhydrous ammonia, and general safe work practices.	8.7.3.1, 8.7.3.2
	8 CCR, Section 750 et seq.	Establishes safety orders of work with high pressure steam.	8.7.3.1, 8.7.3.2
	8 CCR, Construction Safety Orders (Sections 1500 et seq. – 1938 et seq.)	Establishes safety orders for construction work.	8.7.3.1
	8 CCR, Sections 1508 et. seq. – 1527 et seq.	Requirements for IIPP, PPE, and general site safety.	8.7.3.1, 8.7.3.2, 8.7.4
	8 CCR, Sections 1528 et seq. – 1537 et seq.	Requirements for controlling exposures to hazardous air contaminants.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1539 et seq. – 1547 et seq.)	Requirements for excavations and trenching.	8.7.3.1
	8 CCR, Sections 1590 et seq. – 1596 et seq.	Requirements for earth moving and haulage.	8.7.3.1
	8 CCR, Sections 1597 et seq. – 1599 et seq.	Requirements for vehicles, traffic control, flaggers, barricades, and warning signs.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1604 et seq. – 1605 et seq.	Requirements for construction hoists.	
	8 CCR, Sections 1620 et seq. – 1635 et seq.	Requirements for railings, ramps, stairs, access, and egress, openings in floors, roofs and walls, and temporary floors.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1635 et seq. – 1667 et seq.	Requirements for scaffolding.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1669 et seq. – 1678 et seq.	Requirements for safety belts, nets, and ladders.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1680 et seq. – 1708 et seq.	Requirements for saws, powder-actuated tools, miscellaneous tools, and equipment.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 1709 et seq. – 1722 et seq.	Requirements for steel reinforcing, concrete pouring, and structural steel erection operations.	8.7.3.1, 8.7.3.2

Table 8.7-1. Continued

Administering Agency	Applicable LORS	Requirement/Compliance	AFC Conformance Section
Cal/OSHA (continued)	8 CCR, Sections 1760 et seq.	Electrical requirements for construction work.	8.7.3.1
	8 CCR, Sections 1920 et seq. – 1938 et seq.	Requirements for construction-related fire protection and prevention.	8.7.3.1
	8 CCR, Electrical Safety Orders (Sections 2299 et seq. – 2974 et seq.)	Establishes safety orders for installation of low and high voltage electrical systems.	8.7.3.1, 8.7.3.2
	8 CCR, General Industry Safety Orders (Sections 3200 et seq. – 6184 et seq.)	Establishes safety orders for general industry work, including operations and maintenance.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 3200 et seq. – 3583 et seq.	Requirements for IIPP, PPE, and general site safety.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 3620 et seq. – 3920 et seq.	Requirements for mobile equipment operation.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 3940 et seq. – 4647 et seq.	Requirements for power transmission equipment, rotating equipment, moving parts points of operation, etc.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 4794 et seq. – 4884 et seq.	Requirements for compressed gases and gas systems for cutting and welding.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 4850 et seq. – 4853 et seq.	Requirements for electric welding.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 4884 et seq. – 5049 et seq.	Requirements for cranes and other hoisting equipment.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 5094 et seq. – 5100 et seq.	Requirements for control of excessive noise exposure and ergonomic hazards.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 5139 et seq. – 5223 et seq.	Requirements for the control of hazardous substances, including Hazard Communication program requirements.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 5615 et seq. – 5629 et seq.	Requirements for the control of hazards from flammable liquids, gases, and vapors.	8.7.3.1, 8.7.3.2
	8 CCR, Sections 6150 et seq. – 6184 et seq.	Requirements for fire protection and prevention.	8.7.3.1, 8.7.3.2

Table 8.7-1. Continued

Administering Agency	Applicable LORS	Requirement/Compliance	AFC Conformance Section
Cal/OSHA (continued)	8 CCR, Part 6	Provides health and safety requirements for working with tanks and boilers.	8.7.3.1, 8.7.3.2
Federal Occupational Safety and Health Administration[1]	29 CFR 1926	Contains federal health and safety regulations pertaining to construction activities.	8.7.3.1, 8.7.3.2
	29 CFR 1910	Contains federal health and safety regulations pertaining to general industry.	8.7.3.1, 8.7.3.2
California Health and Safety Code	Section 25500 et seq. (LaFollette Bill)	Requires that every new or modified facility that handles, treats, stores, or disposes of more than the threshold quantity of any of the listed acutely hazardous materials prepare and maintain a Risk Management Plan.	8.7.3.2
	Sections 25500 et seq. – 25541 et seq.	Requires the preparation of a Hazardous Material Business Plan that details emergency response plans for a hazardous materials emergency at the facility.	8.7.3.2
Kern County Fire Marshall	UFC, Article 80	Requires the prevention, control, and mitigation of dangerous conditions related to storage, dispensing, use, and handling of hazardous materials and information needed by emergency response personnel.	8.7.3.1, 8.7.3.2
	NFPA 10: Portable Fire Extinguishers	Requirements for the selection, placement, inspection, maintenance, and employee training for portable fire extinguishers.	8.7.3.1, 8.7.3.2
	NFPA 12: Carbon Dioxide Fire Extinguishing Systems	Requirements of the installation and use of carbon dioxide extinguishing systems.	8.7.4, 8.7.3.2
	NFPA 13 & 13A: Sprinkler Systems	Guidelines for selection, installation, maintenance, and testing of fire sprinkler systems.	8.7.3.2
	NFPA 14: Standpipe and Hose Systems	Guidelines for the selection and installation of standpipe and hose fire protection systems.	8.7.3.2
	NFPA 15: Water Spray Fixed Systems	Guidelines for selection and installation of fixed water spray systems.	8.7.3.2
	NFPA 22: Water Tanks and Private Fire Protection	Requirements for water tanks that are used for private fire protection.	8.7.3.2
	NFPA 24: Installation of Private Fire Service Mains and their Appurtenances	Requirements for installation of private fire service mains and appurtenances.	8.7.3.2

Table 8.7-1. Continued

Administering Agency	Applicable LORS	Requirement/Compliance	AFC Conformance Section
Kern County Fire Marshall (continued)	NFPA 26: Supervision of Valves Controlling Water Supplies	Provides guidance for installation and supervision of valves used to control water supplies.	8.7.3.1, 8.7.3.2
	NFPA 30: Flammable and Combustible Liquids	Requirements for storage, transfer, and use of flammable and combustible liquids.	8.7.3.2
	NFPA 37: Stationary Combustion Engines and Gas Turbines	Provides fire protection requirements for the installation and use of combustion engines and gas turbines.	8.7.3.2
	NFPA 50A: Gaseous Hydrogen Systems	Provides fire protection requirements for hydrogen systems.	8.7.3.2
	NFPA 54: National Fuel Gas Code	Provides fire protection requirements for the use of fuel gas.	8.7.3.2
	NFPA 70, 70B & 70E: National Electric Code	Guidance on the safe selection and work practices associated with the design, installation, construction, and maintenance of electrical systems.	8.7.3.1, 8.7.3.2, 8.7.4
	NFPA 71: Installation, Maintenance and use of Central Station Signaling Systems	Provides requirements for the installation, maintenance, and use of central station signaling systems.	8.7.3.2
	NFPA 72A, 72E & 72F: Local Protective Signaling System, Automatic Fire Detection System, Emergency Voice/Alarm Communication System	Provides requirements for the design, installation, use and maintenance of local protective signaling systems, automatic fire detection systems and emergency communication systems.	8.7.3.2
	NFPA 78: Lightning Protection Code	Provides requirements for lightning protection.	8.7.3.2
	NFPA 80: Fire Doors and Windows	Provides requirements for fire doors and windows.	8.7.3.2
	NFPA 90A: Installation of Air Conditioning and Ventilation Systems	Provides guidance for the installation of air conditioning and ventilation systems.	8.7.3.2
	NFPA 101: Life Safety, Fire in Buildings and Structures	Requirements for the design and construction of means of egress from structures.	8.7.3.2

Table 8.7-1. Continued

Administering Agency	Applicable LORS	Requirement/Compliance	AFC Conformance Section
Kern County Fire Marshall (continued)	NFPA 291: Fire Flow Testing and Marking of Hydrants	Requirements for flow testing and marking of fire hydrants.	8.7.3.2
	NFPA 1962: Care, Maintenance and Use of Fire Hoses	Requirements for the care, use and maintenance of fire hoses, connections, and nozzles.	8.7.3.2
Kern County Building Inspector	ANSI/ASME Boiler and Pressure Vessel Code	Provides specifications and requirements for boilers and pressure vessels.	8.7.3.2
	ANSI, B31.2, Fuel Gas Piping	Provides specifications and requirements for fuel gas piping.	8.7.3.2

[1] Cal/OSHA has primary jurisdiction for worker health and safety in California. These regulations are provided for reference purposes and apply as referenced in Cal/OSHA regulations.

ANSI/ASME = American National Standards Institute/American Society for Mechanical Engineers
Cal/OSHA = California Occupational Safety and Health Commission
CCR = California Code of Regulations
CFR = Code of Federal Regulations
IIPP = injury, illness, prevention program
NFPA = National Fire Protection Association
PPE = personal protective equipment
UFC = Uniform Fire Code

Table 8.7-2. South Star Cogeneration Project Hazard Analysis

Activity	Exposure Potential	Potential Hazard	Control Strategies
Heavy Equipment Operation	C, O, M	Employee injury and property damage from collisions with workers and/or facility equipment.	Implement heavy equipment safety program, ensure that operators are properly trained.
Trenching and Excavation	C, O, M	Employee injury and property damage from collapse of trenches and excavations or contact with underground utilities.	Implement an excavation and trenching safety program, ensure operators are properly trained. Require digging permits prior to initiating excavation or trenching.
Work at Elevation	C, O, M	Employee injury due to falls from the same level and elevated areas.	Implement a fall protection program that requires fall protection systems whenever unprotected work is performed at greater than 6 feet.
General Project Work	C, O, M	Employee injury resulting from a slip, trip, or fall.	Maintain good housekeeping, adequate lighting, compliant stairways, and railings.
Crane and Derrick Operation	C, O, M	Employee injuries and property damage due to falling loads.	Implement hoisting and rigging safety program, ensure that operators are properly trained.
Hot Work	C, O, M	Employee injuries and property damage due to fire or explosion.	Implement fire protection and prevention program, require Hot Work permits, ensure that welders, pipe fitters, etc., are properly trained.
Working with Combustible Liquids	C, O, M	Employee injuries and property damage due to fire or explosion.	Implement fire protection and prevention program that includes proper procedures for the proper storage and use of flammable or combustible liquids.
Concrete/Forms Work	C	Employee injuries due to work at height, slips, trips, and falls.	Wear fall protection when working at height, protect exposed rebar, and maintain good housekeeping.
Electrical Work	C, O, M	Employee injuries due to contact with energized parts.	Implement energy control program, including LO/TO of energized sources.
Materials Handling	C, O, M	Employee injuries due to improper lifting.	Implement an ergonomics program, and train employees in proper lifting techniques.
Confined Space Entries	C, O, M	Employee injuries due to suffocation, exposure to toxic materials, engulfment, etc.	Implement a confined space program, including permit procedures and air monitoring requirements.
Compressed Gas Storage	C, O, M	Employee injuries and equipment damage due to explosive release of pressure.	Implement a compressed gas safety program, including procedures for proper use and storage.

Table 8.7-2. Continued

Activity	Exposure Potential	Potential Hazard	Control Strategies
Power Tool Use	C, O, M	Employee injuries due to improper use, or use of damaged power tools.	Implement procedures for inspecting power tools before operation and train employees on the proper use and care of power tools.
Working with or near hazardous or toxic materials	C, O, M	Employee injuries due to exposure to hazardous and/or toxic materials.	Implement hazard communication program and exposure control procedures including: engineering controls, administrative controls, and PPE for activities that may expose employees to hazardous/toxic materials.
Working with or near noisy equipment	C, O, M	Employee overexposure to noise.	Implement a hearing conservation program to include: identifying high noise activities and sources, sound level monitoring, and PPE.
Working with or near exposed machinery	C, O, M	Employee injuries from entanglement in rotating or moving equipment.	Develop and implement machine guarding equipment LO/TO procedures.

C = Construction Phase
O = Facility Operations
M = Facilities Maintenance
LO/TO = lockout/tagout

Table 8.7-3. Protective Equipment Guide

Body Area	Hazards	Recommended Protection
Eyes/Face	Low-velocity flying particles	Safety glasses with side shields
	High-velocity chips and sparks	Impact goggles or safety glasses with full face shield
	Corrosive liquid splash during transfer	Splash proof goggles and face shield
	Welding – injurious light rays	Welding screens and welding hood with appropriate eye filter lenses
Head/Ears	General overhead hazards, overhead rigging, material handling, maintenance, and general construction operations	Non-conductive hard hat
	Noise exposure	Ear plugs or muff
Respiratory System	Low-hazard inert dust	Nuisance dust mask
	Welding fumes	Dust, fume, mist respirator
	Low concentration solvent vapors	Cartridge-type air purifying respirator with organic vapor cartridges
	Acid or base mists	Cartridge-type air purifying respirator with appropriate acid/base cartridges
	High-concentration dusts or toxic vapors, gases	Air line respirator
	Oxygen deficient atmospheres, IDLH concentrations of vapors, gases	Self-contained breathing apparatus
Hands and Arms	Handling rough or sharp objects	Leather gloves
	Handling hot objects	Insulated gloves
	Using solvents	Chemical resistant synthetic gloves
Feet and Legs	General wear for light handling	Safety shoes
	Handling heavy objects	Steel-toed safety shoes
	Using brush hooks or scythes	Shin guards
	Working with corrosive liquids	Chemical resistant safety boots
	Underground work	Synthetic safety toe boots
Trunk and Full Body	Normal work attire	Cotton pants and shirt
	Hot or corrosive liquids	Chemical resistant apron or full body suit
	Punctures, impact, or cuts	Canvas or leather kickback apron or metal mesh apron
	Heat Stress	Provide covered break areas and remind workers to drink plenty of fluids

Table 8.7-3. Continued

Body Area	Hazards	Recommended Protection
Fall Protection/Rescue	Working from elevated structure of platform without standard railings	Full body safety harness and lanyard
	Vessel (confined space) entry	Full body safety harness and lifeline or wristlets and lifeline
	Suspended scaffolds	Full body safety harness/lanyard

IDLH: Immediately dangerous to life and health.

Table 8.7-4. Example Operations Emergency Action Outline

1.0 Introduction
- 1.1 Purpose
- 1.2 Scope

2.0 Responsibilities
- Emergency Response Coordinator
- Alternate Emergency Evacuation Coordinator
- Safety Coordinator
- Position Description Assignments
- Construction/Facility Manager
- Construction/Facility Supervisor
- Operators
- Health and Safety Manager
- Security

3.0 Response and Notification Plan (Points of Contact)
- 3.1 Supervisor/Emergency Coordinator
- 3.2 Health and Safety Manager

4.0 Response Procedures
- 4.1 Evacuation Routes and Procedures
- 4.2 Accidents Involving Serious Injury and/or Death
- 4.3 Fire
- 4.4 Hazardous Waste or Chemical Spills
- 4.5 Earthquake
- 4.6 Bomb Threat
- 4.7 Emergency Plan Shutdown
- 4.8 Site Security
- 4.9 Emergency Medical Treatment and First Aid
- 4.10 Decontamination
- 4.11 Documentation and Recordkeeping
- 4.12 News Media
- 4.13 Emergency Notification List
- 4.14 Emergency Telephone Numbers List

5.0 Reference Procedures
- 5.1 Evacuation Plan
- 5.2 Emergency Equipment Locations
- 5.3 Fire Extinguisher Locations
- 5.4 Security
- 5.5 Accident Reporting and Investigation
- 5.6 Lockout/Tagout
- 5.7 Hazard Communication
- 5.8 Spill Containment and Reporting
- 5.9 First Aid and Medical Response
- 5.10 Respiratory Protection
- 5.11 Personal Protective Equipment
- 5.12 Sanitation
- 5.13 Work Site Inspection

Table 8.7-5. Construction Training Program

Training Course	Target Employees
Site Safety Orientation	All
Injury and Illness Prevention Plan	All
Emergency Action Plan	All
PPE Program	All
Heavy Equipment Safety Program Forklift Operator Training	Employees working on, near, or with heavy equipment
Trenching and Excavation Safety Program	Employees working on or near trenches or excavations.
Fall Protection Program	Employees required to work at elevation (> 6 feet).
Scaffolding Safety Program	Employees required to erect or use scaffolding
Hoisting and Rigging Safety Program	Employees responsible for performing and/or supervising hoisting and rigging.
Crane Safety Program	Employees supervising or performing crane operations
Flammable and Combustible Liquid Storage and Handling	Employees responsible for the handling and storage of flammable or combustible liquids or gasses
Hot Work Permits	Employees performing hot work
Hazardous Energy Control (Lockout/Tagout)	Employees performing lockout/tagout
Electrical Safety	Employees required to work on electrical systems and equipment
Permit Required Confined Space Entry	Employees required to supervise or perform confined space entry
Hand and Portable Power Tool Safety	All
Housekeeping Policy and Program	All
Hearing Conservation	All
Safe Lifting Program	All
Safe Driving Program	Employees supervising or driving motor vehicles
Hazard Communication	All
Pressure Safety	Employees supervising or working on pressurized systems or equipment
Line Breaking Safety	Employees performing general maintenance or working on pressurized systems or equipment
Respiratory Protection Program	All employees required to wear respiratory protection
Fire Prevention Program	All
Emergency Action Plan	All
Recognition of and Treatment for Heat Stress	All
HAZWOPER/First Responder	Employees working around hazardous materials or waste

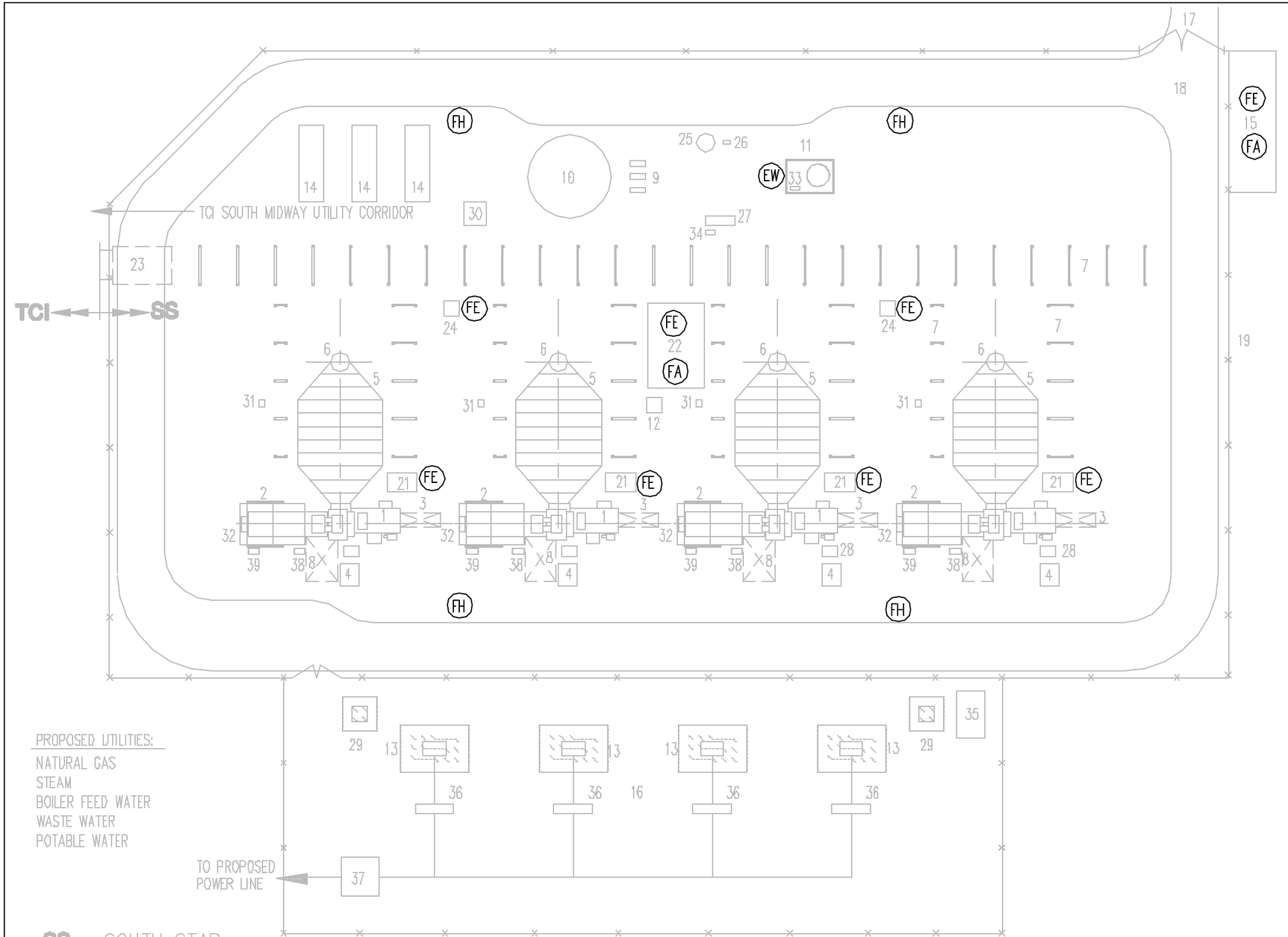
Table 8.7-6. Operations and Maintenance Training Program

Training Course	Target Employees
Site Safety Orientation	All
Injury and Illness Prevention Plan	All
Emergency Action Plan	All
PPE Program	All
Trenching and Excavation Safety Program	Employees performing or supervising trenching or excavation work
100% Fall Protection Program	Employees required to use fall protection
Hoisting and Rigging Safety Program	Employees responsible for the oversight or conduct of hoisting and rigging
Forklift Operator Training	Employees working on, near, or with forklifts
Crane Safety Program	Employees supervising or performing crane operations
Flammable and Combustible Liquid Storage and Handling	Employees responsible for the handling and storage of flammable or combustible liquids or gasses
Hot Work Permits	Employees performing hot work
Hazardous Energy Control (Lockout/Tagout	Employees performing lockout/tagout
Electrical Safety	Employees required to work on electrical systems and equipment
Permit Required Confined Space Entry	Employees required to supervise or perform confined space entry
Hand and Portable Power Tool Safety	All
Housekeeping Policy and Program	All
Hearing Conservation	All
Safe Lifting Program	All
Safe Driving Program	Employees supervising or driving motor vehicles
Hazard Communication	All
Pressure Safety	Employees supervising or working on pressurized systems or equipment
Line Breaking Safety	Employees performing general maintenance or working on pressurized systems or equipment
Relief Valve Maintenance and Testing	Employees performing maintenance or testing of relief valves
Respiratory Protection Program	All employees required to wear respiratory protection
Fire Prevention Program	All
Fire Protection Program	All
Recognition of and Treatment for Heat Stress	All
HAZWOPER/First Responder	Employees working with hazardous materials or waste

Table 8.7-7. Health and Safety Permits

Permit	Issuing Agency	Application Requirements	Permit Procurement
Trenching and Excavation Permit	Any Cal/OSHA district or field office	Required for the following: • Trenches and Excavations more than five feet into which personnel are required to enter or adjacent to structures • Construction of buildings, structures, scaffolding or falsework more than three stories high • Demolition of any building, structure, or the dismantling of scaffolding or falsework more than three stories high	Submit completed permit application to any Cal/OSHA district or field office prior to commencing construction
Permit for the erection of a fixed tower crane	Any Cal/OSHA Administration district or field office	Required for the following: • Erection, • Climbing, and • Dismantling of fixed tower cranes Notifications to the Cal/OSHA must be made at least 24 hours prior to the initiation of the following activities: • Completion of erection and commencement of operation • Climbing of the tower crane • Dismantling of the tower crane	Submit completed permit application to any Cal/OSHA district or field office

Cal/OSHA = California Occupational Safety and Health Administration



FACILITIES LEGEND

1 COMBUSTION TURBINE/GENERATOR PACKAGE
2 COMBUSTION TURBINE INLET AIR FILTER
3 COMBUSTION TURBINE GENERATOR ROTOR REMOVAL AREA
4 COMBUSTION TURBINE LUBE OIL COOLING SKID
5 HEAT RECOVERY STEAM GENERATOR (HRSG)
6 HEAT RECOVERY STEAM GENERATOR EXHAUST STACK
7 PIPE SUPPORT SLEEPERS
8 CT MAINTENANCE PAD
9 HRSG FEED WATER PUMPS
10 FEED WATER STORAGE TANK
11 AQUEOUS AMMONIA STORAGE TANK
12 INSTRUMENT/SERVICE AIR PACKAGE
13 GENERATOR SETUP TRANSFORMER
14 FUEL GAS COMPRESSORS (3)
15 COMMON SEVICES BUILDING/CONTROL ROOM
16 115 KV PLANT SUBSTATION
17 MAIN ACCESS GATE (MOTORIZED)
18 PLANT ROAD
19 PLANT SECURITY FENCE
20 NOT USED
21 I/O CABINET & MCC BUILDING
22 ELECTRICAL EQUIPMENT BUILDING
23 PIPE TRENCH
24 CEMS UNIT
25 DEMINERALIZED WATER STORAGE TANK
26 DEMINERALIZED WATER UNLOADING PUMP
27 WASTE WATER DRAIN TANK
28 CT GENERATOR BREAKER (PRIMARY BREAKER)
29 UNIT AUXILLARY TRANSFORMER
30 FUEL GAS FILTER/SEPARATOR (DUPLEX UNIT)
31 AMMONIA VAPORIZER AND FLOW CONTROL UNIT
32 CO2 BOTTLE RACKS
33 AMMONIA FEED PUMPS
34 WASTE WATER TRANSFER PUMP
35 METERING BUILDING
36 SECONDARY BREAKER
37 MAIN BREAKER
38 WASH DETERGENT STORAGE
39 EVAP. COOLER CORROSION INHIBITOR

(FH) FIRE HYDRANT
(EW) EMERGENCY EYE WASH/SAFETY SHOWER
(FA) FIRST AID KIT
(FE) FIRE EXTINGUISHER

60 0 60 120
SCALE IN FEET

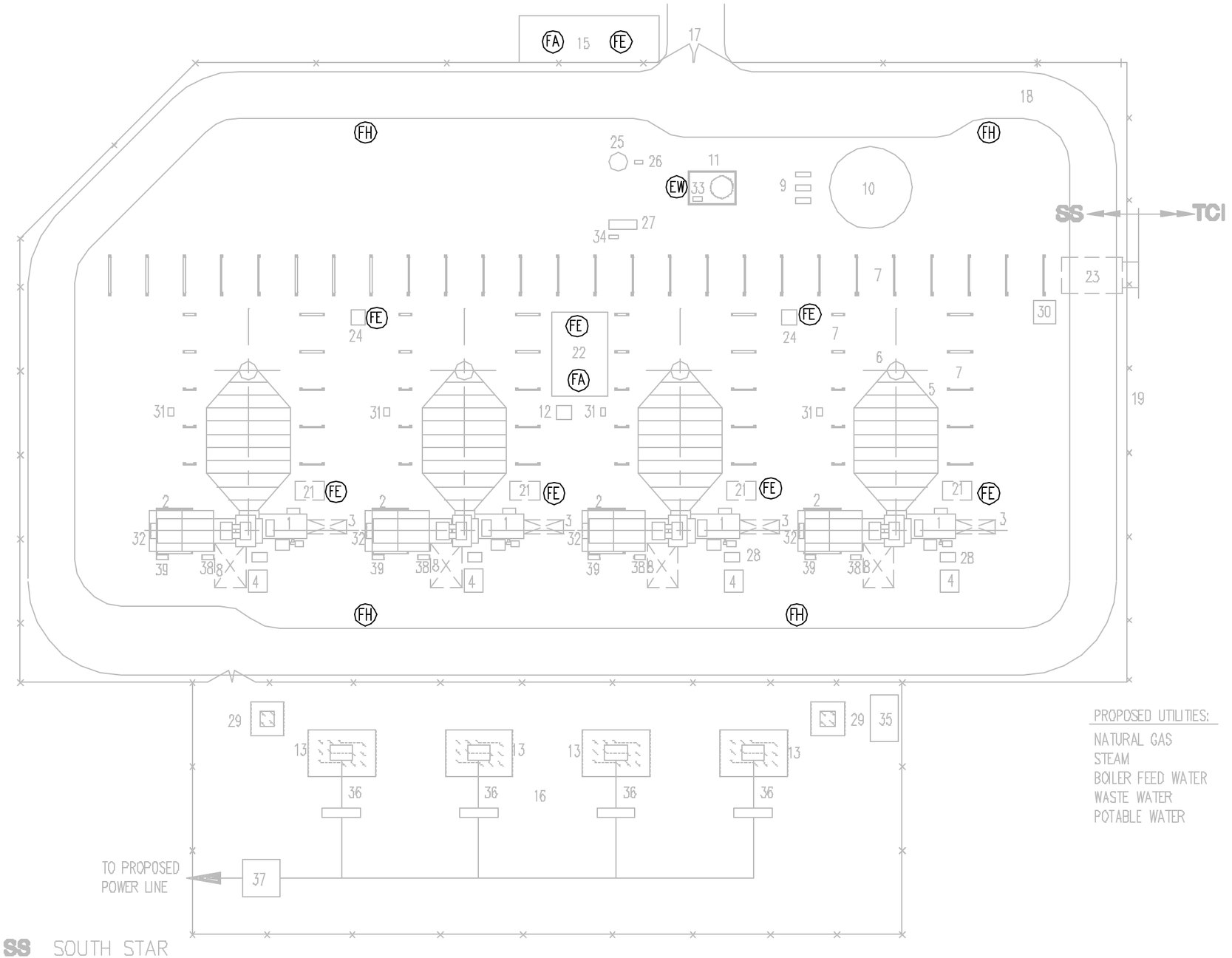
SS SOUTH STAR
TCI TEXACO CALIFORNIA INC.

URS

South Star
Cogeneration Project
Project No. 51-00167034.00

Fire Protection and Emergency Response Equipment Locations - South Star I

Figure
8.7-1A



SS SOUTH STAR
TCI TEXACO CALIFORNIA INC.

PROPOSED UTILITIES:

NATURAL GAS
STEAM
BOILER FEED WATER
WASTE WATER
POTABLE WATER

FACILITIES LEGEND

1 COMBUSTION TURBINE/GENERATOR PACKAGE
2 COMBUSTION TURBINE INLET AIR FILTER
3 COMBUSTION TURBINE GENERATOR ROTOR REMOVAL AREA
4 COMBUSTION TURBINE LUBE OIL COOLING SKID
5 HEAT RECOVERY STEAM GENERATOR (HRSG)
6 HEAT RECOVERY STEAM GENERATOR EXHAUST STACK
7 PIPE SUPPORT SLEEPERS
8 CT MAINTENANCE PAD
9 HRSG FEED WATER PUMPS
10 FEED WATER STORAGE TANK
11 AQUEOUS AMMONIA STORAGE TANK
12 INSTRUMENT/SERVICE AIR PACKAGE
13 GENERATOR SETUP TRANSFORMER
14 NOT USED
15 COMMON SEVICES BUILDING/CONTROL ROOM
16 115 KV PLANT SUBSTATION
17 MAIN ACCESS GATE (MOTORIZED)
18 PLANT ROAD
19 PLANT SECURITY FENCE
20 NOT USED
21 I/O CABINET & MCC BUILDING
22 ELECTRICAL EQUIPMENT BUILDING
23 PIPE TRENCH
24 CEMS UNIT
25 DEMINERALIZED WATER STORAGE TANK
26 DEMINERALIZED WATER UNLOADING PUMP
27 WASTE WATER DRAIN TANK
28 CT GENERATOR BREAKER
29 UNIT AUXILLARY TRANSFORMER
30 FUEL GAS FILTER/SEPARATOR (DUPLEX UNIT)
31 AMMONIA VAPORIZER AND FLOW CONTROL UNIT
32 CO2 BOTTLE RACKS
33 AMMONIA FEED PUMPS
34 WASTE WATER TRANSFER PUMP
35 METERING BUILDING
36 SECONDARY BREAKER
37 MAIN BREAKER
38 WASH DETERGENT STORAGE
39 EVAP. COOLER CORROSION INHIBITOR

(FH) FIRE HYDRANT
(EW) EMERGENCY EYE WASH/SAFETY SHOWER
(FA) FIRST AID KIT
(FE) FIRE EXTINGUISHER

60 0 60 120
SCALE IN FEET

URS

South Star
Cogeneration Project
Project No. 51-00167034.00

Fire Protection and Emergency Response Equipment Locations
South Star II

Figure
8.7-1B